REMARKS

Status of the Application

Claims 1-79 were pending and were rejected. By way of this amendment, claim 58 is amended. Thus, claims 1-79 remain pending.

This response is submitted with a request for a 2-month extension of time and the requisite fee. Thus, the response is timely.

Claim Amendments

Claim 58 is amended to correct a typographical error. Applicants respectfully submit that this amendment is not narrowing and was not made for reasons of patentability.

Rejection under 35 U.S.C. §102(b)

Claims 1, 15-18, 31-46, 48-50 and 53-55 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,954,724 to Kodosky et al. (Kodosky). Applicants respectfully traverse this rejection and request withdrawal of the rejection.

All of these claims generally relate to a function block, associated with a process plant, that implements a state machine or configuring such a function block. For example, claim 1 is generally directed to a method for configuring a function block and recites, *inter alia*, "providing a graphical user interface via the display device for configuring, at least in part, how the state machine is to transition among a plurality of states, wherein the graphical user interface includes a plurality of graphical elements, wherein at least some of the graphical elements can be used to indicate desired transitions between states."

Kodosky, on the other hand, describes a system for generating a hardware implementation of graphical code. The graphical code is exported to a hardware description and a programmable hardware element is configured using the hardware description. For

instance, Fig. 10 of Kodosky illustrates a method for exporting a "structure node" into a

hardware description. Kodosky explains that a "structure node" is "a node which represents

control flow of data" and that an example of a "structure node" is a "While/Do loop[]." *See*

Kodosky at col. 18, line 22-31.

Fig. 12 of Kodosky illustrates another method for exporting a structure node

into a hardware description when the structure node corresponds to a function block.

Additionally, Kodosky provides an example of such a structure node function block. In

particular, Fig. 13 of Kodosky is a While loop function block that may be exported into a

hardware description. Fig. 14 of Kodosky is a state diagram that illustrates the operation of

the While loop function block of Fig. 13. Kodosky does not disclose a method for

configuring the function block of Fig. 13 because the system of Kodosky is not concerned

with configuring function blocks but rather with converting graphical code into a hardware

description. It appears that Kodosky provides Fig. 13 merely to show an example of a

function block that can be converted to a hardware description.

The Office Action failed to establish that Kodosky anticipates claim 1 because

the Office Action failed to show that Kodosky discloses each and every element of claim 1.

For example, the Office Action failed to show that Kodosky discloses or suggests "providing

a graphical user interface via the display device for configuring, at least in part, how the state

machine is to transition among a plurality of states, wherein the graphical user interface

includes a plurality of graphical elements, wherein at least some of the graphical elements

can be used to indicate desired transitions between states," as recited in claim 1.

The Office Action cited col. 19, lines 49-59 of Kodosky as disclosing a state

machine. Thus it appears that the Office Action alleges that Fig. 13 of Kodosky discloses a

state machine. But as discussed above, Kodosky does not disclose a method for configuring

the function block of Fig. 13.

The Office Action cited Fig. 16 as disclosing a graphical user interface that

includes graphical elements which can be used to indicate desired transitions between states

of a state machine. But Fig. 16 of Kodosky does not show a graphical user interface for

configuring the function block of Fig. 13. Rather Kodosky states that "FIG. 16 is a

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conceptual diagram of the resulting hardware after the graphical program example of FIG. 15 is converted into a hardware description." *Kodosky* at col. 20, lines 31-33 (underlining added). Kodosky states that Fig. 15 "[i]llustrates a simple example of a graphical program" that merely includes two Add function nodes. *Kodosky* at col. 20, lines 21-29. Thus, Fig. 16 is not related to Fig. 13. Moreover, Fig. 16 is not related to a state machine.

Further, Fig. 16 is not even an illustration of a graphical user interface. Rather Fig. 16 is merely a "conceptual diagram" of hardware after a graphical program is converted to a hardware description. See Kodosky at col. 20, lines 31-33.

At least for the reasons discussed above, the Office Action failed to establish that Kodosky anticipates claim 1.

Claims 15-17 depend from claim 1. At least for the same reasons discussed above with respect to claim 1, the Office Action failed to establish that Kodosky anticipates claims 15-17.

At least for reasons similar to those discussed above with respect to claim 1, the Office Action failed to establish that claims 18, 31-46, 48-50 and 53-55 are anticipated by Kodosky.

Accordingly, withdrawal of the rejection is respectfully requested.

Rejection under 35 U.S.C. §103

Claims 2-5, 9, 19-22, 26, 47, 58-74, 76 and 78 were rejected under 35 U.S.C. §103 as being unpatentable over Kodosky in view of U.S. Patent Publication No. 2002/0194218 to Klapper et al. (Klapper). Claims 12-14, 28-30, 51 and 52 were rejected under 35 U.S.C. §103 as being unpatentable over Kodosky in view of U.S. Patent No. 6,954,724 to Khrapunovich et al. (Khrapunovich). Claims 6-8, 23-25, 77 and 79 were rejected under 35 U.S.C. §103 as being unpatentable over Kodosky in view of Klapper and further in view of Khrapunovich. Claims 10, 11 and 27 were rejected under 35 U.S.C. §103 as being unpatentable over Kodosky in view of Klapper and further in view of U.S. Patent

No. 6,369,836 to Larson et al. (Larson). Applicants respectfully traverse these rejections because the Office Action failed to establish a prima facie case of obviousness.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *See M.P.E.P.* Section 2143.03, *citing In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970) ("All words in a claim must be considered in judging the patentability of that claim against the prior art."). Here, the alleged combinations of Kodosky with the other cited references do not teach or suggest all of the limitations of the claims.

With respect to claim 58, for example, it is generally directed to a function block entity for use in a process plant and recites, *inter alia*, "a user modifiable state machine configuration database including state transition data indicative of how a state machine implemented by the function block is to transition among a plurality of states, wherein the state transition data comprises data, for each of the at least some possible pairings of each of at least some of the plurality of states and each of at least some of at least one input to the function block, indicative of a next state to which the state machine should transition when the state machine is in the corresponding state and when the corresponding input is a particular value." None of the cited documents disclose or suggest this element, neither individually nor in combination.

The Office Action admitted that Kodosky does not disclose this element: "[Kodosky] does not teach a user modifiable state machine configuration database." *Office Action* at p. 22. The Office Action then alleged that Klapper discloses this element. Applicants respectfully traverse this assertion.

Klapper describes a system for generating logic corresponding to a cause and effects matrix, which can be used to monitor and effect a change in a process system. Fig. 1 of Klapper shows a cause and effects matrix. Rows of the matrix correspond to input variables that are to be monitored, and columns of the matrix correspond to outputs that are to be generated. For example, a row of a cause and effects matrix may correspond to an input variable exceeding a limit. A column may correspond to causing a valve to close. Data displayed at the intersection of a cause and an effect indicates whether the particular cause

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should result in the particular effect. For example, data at an intersection indicates whether when an input variable exceeds a limit (row) a valve should be closed (column).

The cause and effects matrix of Klapper is not "data, for each of the at least some possible pairings of each of at least some of the plurality of states and each of at least some of at least one input to the function block, indicative of <u>a next state</u> to which the state machine should transition <u>when the state machine is in the corresponding state and when the corresponding input is a particular value</u>" as recited in claim 58. Rather, the cause and effects matrix of Klapper merely indicates whether a particular input variable event (e.g., the input variable exceeding a limit) should cause an action (e.g., close a valve). In other words, the columns of the cause and effects matrix do not corresponds to states of a state machine, but merely correspond to actions that are to be taken. For example, column number 1 of Fig. 1 corresponds to the action "Close Main Fuel Valve 1" as opposed to a state such as "Main Fuel Valve 1 is closed." Further, an individual element of column number 1 does not correspond to a state to which a state machine should transition (i.e., a next state) when the state machine is in a state corresponding to column number 1 <u>and</u> when an event corresponding to the row occurs. For example, the intersection of column number 1 and row number 1 specifies that the action "Close Main Fuel Valve 1" should be taken when "High Furnace Pressure" occurs. It does not specify that a state machine should transition to some next state <u>when</u> the state machine is in a "Main Fuel Valve 1 is Closed" state <u>and when</u> a "High Furnace Pressure" occurs, for example.

Thus, the alleged combination of Kodosky and Klapper does not disclose or suggest the above-discussed elements of claim 58. Moreover, none of the other documents cited in the Office Action disclose or suggest these elements.

At least for these reasons, the Office Action failed to show that the cited references disclose or suggest all of the elements of claim 58.

Claims 59-79 depend from claim 58. At least for the same reasons as discussed above with respect to claim 58, the Office Action failed to show that the cited references disclose or suggest all of the elements of each of claims 59-79.

At least for reasons similar to those discussed above with respect to claim 58, the Office Action failed to show that the cited references disclose or suggest all of the elements of each of claims 2-14, 19-30, 47, 51, 52, 56 and 57.

Accordingly, withdrawal of the rejections is respectfully requested.

Conclusion

In view of the above remarks, Applicants believe the pending application is in condition for allowance.

Dated: March 19, 2007   Respectfully submitted,

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